14, 19, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Olsson in view of U.S. Patent No. 6,650,366 to Wilkins (hereinafter "Wilkins") and claims 12 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Olsson in view of U.S. Patent No. 6,483,932 to Martinez (hereinafter "Martinez"). Applicant respectfully traverses these rejections and respectfully requests that the Examiner reconsider these rejections in view of the following comments.

As claims 1 and 13 are independent, the other rejected claims being dependent, this response focuses initially on claims 1 and 13. Independent claims 1 and 13, among a number of unique features, require some variation of determining a timing for selecting at least one suitable picked-up image of said plurality of picked up images, where the selection is based on a result from said obtained information and where the selected at least one suitable picked-up image is output to at least one of a display and a fingerprint recognition module. Applicant respectfully submits that the unique combination recited above of claims 1 and 13 is absent from the Olsson reference.

An exemplary embodiment of the present invention is consistent with an image pick-up apparatus for picking up a plurality of images being chronologically arranged along time-series, in attempts to determine which image has the highest quality. After the images are picked up, information about changes in gray level value between the picked up images is determined. Based on that information, a timing for extracting a more suitable (a better quality) image is determined. An aspect of the present invention is to select an image of the highest quality by analyzing the chronological change information, a judging criteria (changes in gray level values

between the picked up images). In short, the image pick-up apparatus attempts to select an

image of better quality from a number of picked up images and either output this image on a

display, for example, or output this image to a fingerprint recognition module. It will be

appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are

not necessarily limitative of any claims and are intended only to help the Examiner better

understand the distinguishing aspects of the claims mentioned above.

Olsson is no different from Hanko previously made of record. Olsson has nothing to do

with fingerprint images. Instead, Olsson relates to reducing noise in a video signal, which

includes a number of video frames being composed of a plurality of pixels. In Olsson, the video

information contained in a current video frame is compared with a number of a temporally

adjacent video frames, and from the current video frame and the adjacent video frames, the video

information that according to a predetermined condition is likely to be correct for the current

video frame is selected. The selected video information is assigned to the current video frame to

thereby produce a video frame where noise is reduced (*see* Abstract and col. 2, lines 25 to 63).

In Olsson, as is common with noise reduction techniques, a frame is <u>not selected</u> from a

number of frames but rather is <u>composed or created</u> from a number of frames. The Examiner

alleges that col. 7, lines 44-52 of Olsson disclose the selection from the plurality of image frames

(*see* page 3 of the Office Action). Col. 7, lines 44 to 52 recites:

> [a]ll of the frame storage blocks 410-422
> provide frame data to a noise reduction
> processor 424, which performs the steps set
> forth herein to accomplish noise reduction. As
> shown in FIG. 4, seven frames are used as
> input **to create** a single output frame 426. In

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> a preferred embodiment, a maximum "tube depth"
> of seven frames has been found to balance the
> need for computational efficiency with the
> need to provide a sufficient number of frames
> to accomplish meaningful noise reduction,
> (emphasis added).

Indeed, as is clear from the passage above, a plurality of frames are used to compose one output

frame. In Olsson, a subset of slices are selected and the actual noise reduction takes place by

selecting video information from a pixel that is most likely to have similar predecessors and

successors and then assigning the selected video information attributes to the current pixel.

Accordingly, an output frame is created (col. 6, line 48 to col. 7, line 32). In short, Olsson only

discloses creating and not selecting an output frame.

Further, the Examiner alleges that "output of noise reduction is input into a digital frame

output and analog video output" is equivalent to a display (*see* page 3 of the Office Action). The

Examiner has not provided supporting passages from Olsson. Olsson only discloses that after

the noise reduction technique is performed, an output frame is fed from the noise reduction

system to an output format converter 520, which is provided with a digital frame output 522 for

outputting a digital video output signal. In an alternative embodiment, the output format

converter 520 is also provided with a digital to analog converter 524 and an analog video output

526 for outputting a modified analog video signal. As an alternative, the output format converter

520 is provided with both kinds of outputs (col. 9, lines 35 to 48).

In Olsson, however, as explained above, the created frame is output to a format converter.

That is, the digital frame output and the analog video output are data types in which the frame

may be converted to. In other words, the created frame is output to a converter for further data

conversion. In short, Olsson does not teach or suggest outputting a selected frame to a display or a fingerprint output module. Instead, Olson only discloses outputting the created frame to a converter.

Therefore, determining a timing for selecting at least one suitable picked-up image of said plurality of picked up images, wherein said selection is based on a result from said obtained information and wherein the at least one selected suitable picked-up image is output to at least one of a display or fingerprint detection module as set forth in the independent claims 1 and 13, are not taught or suggested by Olsson. For at least these exemplary reasons, Applicant respectfully submits that claims 1 and 13 are patentable over Olsson. Thus, it is appropriate and necessary for the Examiner to withdraw this rejection of claims 1 and 13. Claim 22 is patentable at least by virtue of its dependnecy on claim 13.

Next, claims 2, 7, 8, 14, 19, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Olsson in view of Wilkins. Claims 2, 7, and 8 depend on claim 1 and claims 14, 19, and 20 depend on claim 13. Applicant has already demonstrated that Olsson does not teach or suggest the unique features of claims 1 and 13. Wilkins is being cited only for its teaching of counting number of grey level increases and number of grey level decreases for producing a statistical profile (*see* pages 4-5 of the Office Action) and as such, Wilkins clearly fails to cure the deficient teachings of Olsson. Therefore, claims 1 and 13 are clearly patentable over the combined teachings of Olsson and Wilkins. Claims 2, 7, 8, 14, 19, and 20 are patentable at least by virtue of their dependency on claim 1 or 13.

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Claims 12 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over

Olsson in view of U.S. Patent No. 6,483,932 to Martinez (hereinafter "Martinez"). Claims 12

and 23 depend on claim 1 and claim 13, respectively. Applicant has already demonstrated that

Olsson fails to teach or suggest the unique features of claims 1 and 13. Martinez is only cited for

its teaching of a fingerprint image data processing (*see* page 5 of the Office Action) and as such

clearly fails to cure the deficient teachings of Olsson (*also see* previous Amendments, *i.e.*,

Amendment under 37 C.F.R. § 1.111 filed December 30, 2003, Request for Reconsideration

under 37 C.F.R. § 1.111 filed June 9, 2004, Amendment under 37 C.F.R. § 1.116 filed November

17, 2004, and Amendment under 37 C.F.R. § 1.111 filed on May 9, 2005). Accordingly, claims

1 and 13 are clearly patentable over the combined teachings of Olsson and Martinez. Claims 12

and 23 are patentable at least by virtue of their dependency on claims 1 and 13, respectively.

Allowable Subject Matter

Applicant thanks the Examiner for allowing claims 3-6, 9-11, 15-18, and 21. Applicant

does not acquiesce to the Examiner's reasons for allowance.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly invited to contact the undersigned attorney at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. § 1.116
U.S. Appln. No. 09/740,954
Attorney Docket No.: Q62391

The USPTO is directed and authorized to charge all required fees, except for the Issue

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Respectfully submitted,

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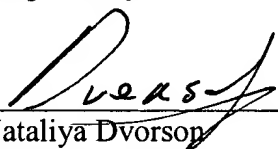
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